

Hirstiella tenuipes (Hirst), new combination

Pimeliophilus tenuipes Hirst, 1917, Ann. Mag. Nat. Hist. 19, ser. 8 (109): 1942; Hirst, 1926, Jour. Linn. Soc. Lond. 36 (242): 197; Radford, 1942, Parasitol. 35 (1,2): 71.

Diagnostic characters are to be found in the triangular dorsal shield which lacks striae and possesses three pairs of setae. Hirst gives the body measurements as 274 μ long by 220 μ wide, making this the smallest of these mites.

This short diagnosis was made from a figure by Hirst, 1926.

Type host.—*Gonatodes albogularis* (Duméril and Bidron) (lizard), Honda, Magdalena River, Colombia. Type in British Museum (Natural History).

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NOTES ON NEOTROPICAL MUTILLIDAE

IV. SYNONYMY AND DISTRIBUTION OF HOPLOCRATES, WITH DESCRIPTIONS OF NEW FORMS

(HYMENOPTERA)¹

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The species of the striking and bizarre genus *Hoplocrates* have been recently monographed by Mickel (Rev. de Ent. 12: 341-414, 1941), who has brought the descriptions of species and their distributions up to date.

The present short contribution is supplemental to this study. For keys, discussions of the phylogeny, etc., the student is referred to the above-cited paper. The synonymy cited in the present paper is new or differs from that given by Mickel.

¹ Previously-issued papers in this series:

A new species of *Pseudomethoca* from the West Indies. Bull. Brooklyn Ent. Soc. 40: 7-8, 1945.

A key to the Central American, Mexican and West Indian species of *Ephuta*, with descriptions of new species. Rev. de Ent. 16: 187-204, 1945.

A key to the subfamilies represented and descriptions of several new genera. Ent. Amer. (n.s.) 29: 59-140, 1949.

Contributions to the genus *Hoplomutilla* Ashmead. Rev. de Ent. 22: 315-328, 1951.

Hoplocrates specularis (Gerstaecker)

Mutilla erythraspis Gerstaecker, Arch. Naturg. 40:48, 1874, male; *Hoplocrates erythraspis*, Mickel, Rev. de Ent. 12: 362, 1941. NEW SYNONYMY.

Hoplocrates scutellaris Mickel, Rev. de Ent. 12: 363, 1941, male. NEW SYNONYMY.

The above synonymy is based on four females and five males taken together by Fritz Plaumann, at Nova Teutonia, Providence Santa Catarina, Brazil. Four males and one female were taken on December 22, 1938; three of these males were typical *erythraspis*, while one was the form with the genal spines reduced and inconspicuous.

Several collections from the same locality appear to demonstrate that *specularis* is the only female of the genus at that locality, and *erythraspis* and *scutellaris* the only males. Of the five males before me, two belong to the *scutellaris* extreme, having the genal spines reduced; one of these males is 11 mm. long, and similar in size to the type material of *scutellaris* (which ranged from 9-13 mm.); the other male is 15 mm. long, and exactly identical in size with typical males of *erythraspis*. Critical examination discloses no other difference between *erythraspis* and *scutellaris*; furthermore, the genal spines of *erythraspis* (typical) vary somewhat in size. Under these conditions I cannot but conclude that *scutellaris* is not specifically distinct; it may possibly be an underdeveloped modification induced by parasitism of an unusually small host species. The occurrence of reduced genal spines (mere angulations) on one full sized male appears to indicate that the size of the genal spines is not fixed even under normal conditions of nutrition. Mickel (*loc. cit.*, p. 364) states that the type material of *scutellaris* varies considerably in the vestiture of the apex of the second abdominal tergite; in some males it is silvery, interrupted medially by black, in others it is entirely black. It is of some interest that the same variation also occurs in *erythraspis*, one of the three males of that form before me having the apical fringe entirely black. This similarity in variation is a further indication that *erythraspis* and *scutellaris* are not specifically distinct.

Hoplocrates rufonotata (André)

Two females before me of this species, heretofore known from four females from Peru and Bolivia.

PERU: Upper Rio Huallaga, September 30, 1929, one ♀; Moyobamba Region, December 5, 1925, one ♀.

These two specimens have the pygidial area distinctly granulose, with the granules scarcely arranged in rugae, even at the pygidial base.

Another female from Ecuador appears to represent either a distinct species or subspecies. Since its range appears to be more northern, and its distribution may be complementary to that of *rufonotata*, I prefer to consider it subspecifically distinct for the time being.

Hoplocrates rufonotata subspecies **upanoa**, new subspecies

Similar to *rufonotata*, but differing as follows: Fulvous median, basal macula of second abdominal tergite narrowly obcuneate (about 1.5 as long as wide), scarcely a third as wide as second tergite (in *rufonotata* broadly obovate, and not or scarcely longer than wide, nearly half as wide as second tergite); head behind temples less developed (ratio of length of eye to distance from posterior eye-margin to apex of posterolateral angulation is 7:10, or about 1.5 eye-length; in typical *rufonotata* this ratio is 7:14, or twice eye-length); silvery maculae of vertex reduced (width about equal to length of area behind macula; in *rufonotata* region of silvery pubescence extends back to near posterolateral angles, and area back of maculae scarcely half as long as macula); transverse, median line of elevation of clypeus has two teeth laterad of median line much more strongly developed than tooth on outer side of transverse ridge (in typical *rufonotata* outer teeth somewhat more strongly developed; in no case are they mere angulations); pygidium distinctly, obliquely, outwardly rugose on basal two-thirds of area, apical third largely devoid of sculpture (in *rufonotata* entire pygidial area, except apex, granulose, with granules arranged locally in rows approaching rugae in appearance, but never distinctly rugose).

Holotype.—Macas, Rio Upano, Ecuador, January 1, 1939. Deposited in the collection of the American Museum of Natural History.

This subspecies keys out to *rufonotata* in Mickel's key (*loc. cit.*, p. 351); it may easily be separated from that species by the narrower macula of the second tergite, and by the difference in armament of the elevated, transverse line of the clypeus.

Hoplocrates ucayalia, new species

Female.—Length 16.5 mm. Totally black, except for middle portions of mandibles, and legs, which are less intensely pigmented (reddish-piceous in color). Pubescence of dorsum black, composed of simple, erect hairs and decumbent, flattened, setose, scale-like hairs, except for two large maculae on vertex, apex of tergite one, a lanceolate, median, longitudinal macula at base of tergite two, thin, apical border of tergite two, and most of tergite three, which are provided with erect and decumbent, thick, pale, golden-fulvous hairs; some scattered, inconspicuous, golden hairs on dorsum of alitrunk; smaller areas of pale pubescence also laterally on base of tergite two, on clypeal region, on genae, and at apex of abdomen; with erect, white hairs on pleural and ventral regions of body (these regions totally lack black vestiture).

Head black; ventral part of face with erect, sparse, fine, white hair; genae with sparse, decumbent, white hair; clypeal region with whitish, erect hair; the rest of head with sparse, erect, terete, and decumbent, dense, stiff, flattened, scale-like black pubescence, except for vertex, which

is provided on each side with an obliquely-rectangular macula of appressed, pale golden, bright, prominent hair, merging gradually into the silvery hair of the genae; frons and vertex with contiguous, deep, coarse, dense punctures, separated by thin, lamelliform, sharp intervals; genae and outer face of hypostomal processes with coarse, round, close (but distinctly separated) punctures; hypostomal processes very large, nearly four times as high as genal processes, conical, spinous, tips abruptly, outwardly bent; genal processes small, located directly posterior to and laterad of hypostomal processes, not connected with the posterolateral angles of the head by a carina; each mandible acuminate at apex, with a moderate tooth about a fourth from apex on inner margin, and a larger, coarser tooth just basad of that; clypeus with anterior margin quadrituberculate, with a pair of outer, large, tooth-like tubercles, and with a pair of small, glabrous, rounded, mesally-situated, nearly approximate tubercles, separated by a narrow, shallow sinus; just behind these, clypeus raised as a polished, transverse, low, broad ridge, almost devoid of punctures (this not at all, however, produced into a second pair of tubercles); dorsal part of clypeus closely, moderately punctured and pubescent, flat, slightly delimited near posterior margin by an obscure ridge (thus not distinctly concave); antennal tubercles spinose-dentiform produced; scape, pedicel, and proximal half of first flagellar segment with appressed, silvery hair; first flagellar segment as long as segments 2-4 combined; posterolateral angles of head strongly, almost lamellately produced, ending below in a dentiform process.

Alitrunk entirely black; dorsum coarsely, densely, deeply, contiguously to confluent punctured, intervals high and thin (often obsolete transversely; middle of posterior face of propodeum nearly impunctate; dorsum clothed with moderate, erect, fuscous or black hair, and with flattened, blade-like, decumbent hair on pronotum (to a lesser degree on metanotum); meso-metanotum in addition with sparse, rather inconspicuous, appressed pale golden hairs; dorsal face of propodeum with erect, fuscous hairs, posterior face with sparse, erect silvery hair; pleural faces and venter with sparse, erect, silvery hair, lateral faces of alitrunk, in addition, with dense, fine, appressed, sericeous, cinereous microvestiture; humeral angles moderately carinate; posterolateral edges of propodeum rugose-punctate, pleural areas (excepting a few scattered punctures) with micropunctures only.

Abdomen totally black, except narrow, apical border of each segment, which has integument deep ferruginous; first tergite with anterior face with rather small, scattered punctures, bearing erect, fine, white hair; junction between anterior and dorsal faces closely, confluent punctured; dorsal face clothed with a transverse band of conspicuous, pale golden pubescence which is narrowly interrupted on meson; second tergite with coarse, strongly confluent punctures (resulting in a decidedly asperate appearance), laterally punctures as coarse, but less sharply defined; vestiture of second tergite black, sparse, simple, erect and decumbent hair (scattered among which are spatulate, scale-like hair), except for

a euneate-lanceolate median, longitudinal macula of pale golden hair (which extends from base to slightly beyond middle of tergite), and some scattered hair near antero-lateral corners, and on the lateral margins and felt lines, which are pale, and apical band of tergite, which is provided with dense, golden hairs (slightly interrupted medially by black hairs); third and following tergites with contiguous, rather coarse punctures apically, those of third tergite bearing a broad band of pale golden-fulvous hair (interrupted medially by sparse fuscous hair, and not continuing quite to lateral margins of tergite), those of tergites four to five, and on base of tergite six, with erect and decumbent, fuscous or blackish hair; pygidium granulose; second sternite with scattered, coarse punctures, bearing white hairs; punctures closer apically, and a weak band of white hair visible there; apical sternites with distal bands of close, contiguous, moderate to rather coarse punctures, bearing sparse whitish hairs; distal part of hypopygium with close, small punctures, bearing short, subfuscous hair.

Holotype.—Rio Tapiche, Peru, December 14, 1923 (H. Bassler, coll.). Deposited in the collection of the American Museum of Natural History. PERU: Middle Rio Ucayali, November 10, 1923 (H. Bassler, coll.), 1 ♀ paratype retained in author's collection (to be deposited in Cornell University).

This species is somewhat allied to *H. dryope* Mickel, but differs from that species in that the antennal tubercles are strongly dentate (not "subdentate"), in that the dorsal face of tergite one has a transverse band of appressed, pale golden hairs (instead of "dorsal face with few, scattered, appressed golden hairs, in addition to erect black hairs"), and in that the second tergite has a linear-obcuneate longitudinal median spot of very pale golden, not fulvous hairs (instead of an "ovate spot of . . . golden pubescence").

In Mickel's key (*loc. cit.*, p. 350), *ucayalia* runs to couplet 14. If the first part of that couplet is followed, because of the golden or pale fulvous color of the spot of the second tergite, it runs to *dryope*, from which it differs as above. If the second part of the couplet is followed, because of the almost linear nature of the macula of the second tergite, it runs to couplet 21. It differs from *pompalis* Mickel, which keys out here, in that the clypeus is not flat throughout, but is somewhat convex medially (though not produced as a pair of tubercles); it also does not have the antennal tubercles quite as strongly armed nor is the pale maculation of the dorsum of the thorax distinct (it, furthermore, is not whitish, but somewhat golden pigmented). The weak development of the anterior median pair of tubercles of the clypeus separates this species from *armata* Klug, while the absence of a pair of subapical weak tubercles posterior to the marginal clypeal tubercles separates the species from *tartarina* Mickel, *admiranda* Mickel, and *oblectanea* Mickel.

The types of *ucayalia* have been compared with the three species with which confusion is most likely: *pompalis*, *armata*, and *admiranda*; the student may seek this species under any of these three in Mickel's key; for that reason a short key, separating the four forms, is given below:

1. Anterior margin of clypeus strongly bituberculate medially (almost bidentate), without a pair of subapical, median tubercles immediately behind marginal ones; second tergite silvery maculate medially; alitrunk with a pair of longitudinal, prominent maculae of pale hairs.....*H. armata* Klug
Anterior clypeal margin weakly bituberculate medially..... 2
2. With a pair of weak, median, submarginal tubercles on the clypeus, just posterior to the marginal, anterior tubercles; alitrunk with few, scattered, pale hairs dorsally..... *H. admiranda* Mickel
With a transverse, slight, impunctate and shining elevation just posterior to marginal, median tubercles of clypeus, but the face of clypeus not at all produced as a pair of tubercles 3
3. Alitrunk with a pair of lateral, elongate maculae of silvery hairs; antennal tubercles with teeth very strong and prominent; maculae of second tergite silvery; clypeus posteriorly strongly defined by an elevated margin, punctate area anterior to this conspicuously concave *H. pompalis* Mickel
Alitrunk as in *admiranda*, with scattered silvery and golden hairs; tubercles with teeth moderately strong, as in *admiranda*; maculae of second tergite pale golden; clypeus scarcely defined by a raised margin posteriorly, punctate area flat, not strongly concave..... *H. ucayalia*, new species

Hoplocrates moneta (Gerstaecker)

A single female from Felipe, Ovalle, Q., Colombia, is before me.

Hoplocrates pompalis Mickel

A single female from Los Canales, Naignata, D. F., Venezuela, September 24, 1938 (G. Vivas Berthier) is before me.

Holocrates admiranda Mickel

Three females are before me. This species was known only from two females, from Ecuador.

PERU: Rio Santiago, September 15, 1923, one ♀; Rio Ucayali, September 27, 1923, one ♀. Species new to Peru.

ECUADOR: Sueua, Rio Upano, February 2, 1939, one ♀.